Automation with SAP Situation Handling and Joule: Transforming Finance Operations

PRESENTED BY:

Detect, alert, and resolve before issues escalate.

Raghu Ram Thatavarthy | Quadric IT

Co-author, Introducing Situation Handling with SAP S/4HANA (SAP PRESS)

SAP 2026 CONTROLLING FINANCIALS

About the Speaker

Raghu Ram Thatavarthy

Customer Success Manager, Quadric IT

- Commerce Graduate
- Chartered Accountant, India
- 22 years of SAP consulting in Finance and Controlling
- Focus: ERP transformations and building AI use cases
- Co-author, Introducing Situation Handling with SAP S/4HANA (SAP PRESS)
- Systems integration for brand acquisitions at Restaurant Brands International: Tim Hortons, Popeyes and Firehouse Subs onto the Burger King platform

CAREER

Accenture, Capgemini
SAP Finance & Controlling Competency Lead

Konecranes
Controlling product owner

Restaurant Brands International
Director Corporate Systems
Support, Integrations & Brand acquisitions

Quadric IT
Customer Success Manager, ERP & AI

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Meet Alex, Cost Accountant, on Close Day 3

Failed jobs

Two allocation cycles failed overnight. The error sits in a job log nobody opened.

Growing GR/IR gap

A GR/IR difference has been growing since day 12.

Missing revenue

Three billing documents never reached accounting, so revenue looks light.

Budget overrun

A cost center is 14% over budget; the owner has not seen a number since last month.

None of this was hidden. It was simply never pushed to anyone.

What if the system had told the right person on day 12?

Not another report to run. The system finds the owner who can fix it and reaches them where they work: an in-app notification, a To-Do on My Home, a My Situations entry, an email, or a Joule prompt, with the context and the action attached.

Purchase Contract

Quantity Contract

4600005970

Header Information

Contract Type Quantity Contract (MK)

Supplier Inlandslieferant DE 1 (10300001)

Purchasing Organization Purch. Org. 1010 (1010)

Consumption	Valid To	Approval Status
0%	12/20/2024	Approved automatically

General Information | Delivery and Payment | Reference | Header Conditions | Items | Partner | Output Control | +3

Target Value:
150,000.00 EUR

Valid From:
12/01/2023

Valid To:
12/20/2024

Purchasing Group:
Group 001 (001)

Company Code:
Company Code 1010 (1010)

Exchange
1.00000

Fixed Exch
No

Delivery and Payment

Delivery Terms

Incoterms:
–

Incoterms Version:
No Version

Incoterms
–

Payment Terms

Payment Terms:
As of End of Month (0004)

First Payment:
0

Discount for First Payment:
0.000

Second Pa
0

Discount f
0.000

Reference

Hello,

How can I assist you?

Talk to me naturally. For example, 'View quick actions for review booklet'

Get started with Joule

Show Situations

View Quick Actions

Show me all my situations

Joule is powered by generative AI and all output should be reviewed before use. Please do not enter any sensitive personal data, and avoid entering any other personal data you do not wish to be processed.

Situation Handling: the SAP framework that pushes the issue to its owner

Introduced

- **Standard framework:** since 2018
- SAP S/4HANA Cloud 1802 and SAP S/4HANA 1809 (on-premise)
- **Extended framework:** SAP S/4HANA Cloud 2202 and SAP S/4HANA 2021 FPS02
- Object-based and message-based templates, plus your own scenarios, from the extended framework onward

Where it runs

- SAP S/4HANA Cloud Public Edition (every release)
- SAP S/4HANA Cloud Private Edition and on-premise, 1809 and later
- Delivered as part of the core, no extra licence; switched on by activating a situation type
- Notifies via Fiori launchpad, My Situations, email, and Joule

Templates

- **Samples:** Billing Documents Not Posted to Accounting
- GR/IR reconciliation: overdue differences
- Application job failed
- Journal entry verification overdue
- **Find them:** Manage Situation Types app (standard) and Manage Situation Types (Extended), Templates tab; full catalogue on the SAP Help Portal under Situation Handling

Situation Handling at a Glance

- Detect automatically → alert the right users → propose actions to resolve

Solution

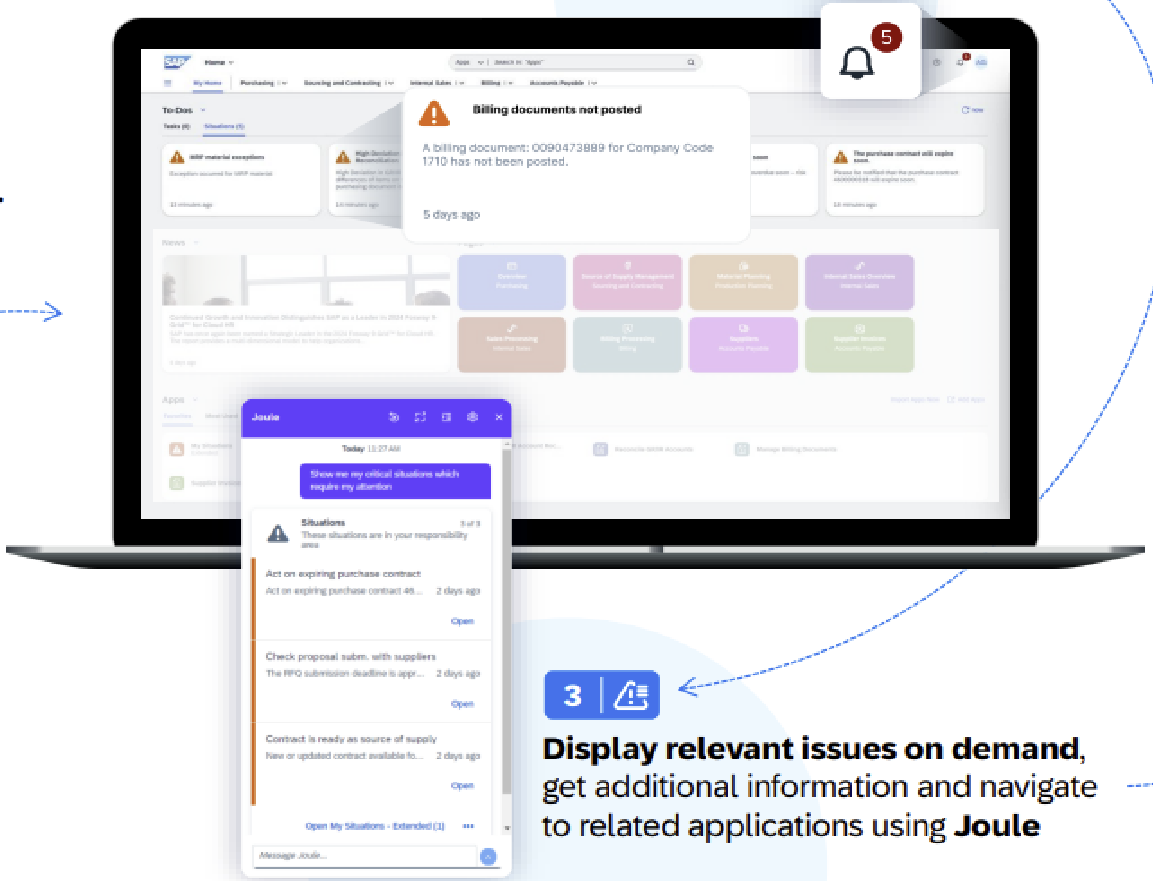
Situation Handling in SAP S/4HANA Cloud notifies the responsible users about critical issues that require their attention.

1

Detect critical business issues automatically

2

Alert the relevant users in the SAP Fiori launchpad, by e-mail or via SAP Mobile Start, and indicate situations in applications

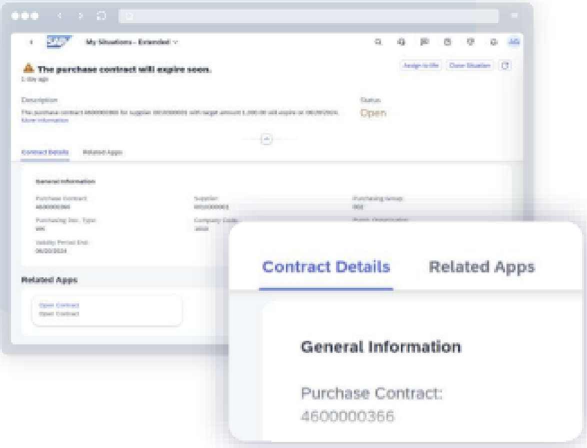


3

Display relevant issues on demand, get additional information and navigate to related applications using **Joule**

Provide **contextual information** to support informed **decision-making**

4



135+ Situation Templates – Out of Box Use Cases

Home | Use Cases for Situation Handlin

help.sap.com/docs/SAP_S4HANA_ON-PREMISE/8308e6d301d54584a33cd04a9861bc52/fdbf5eabf0e84621a1

PDF | Favorite | Share

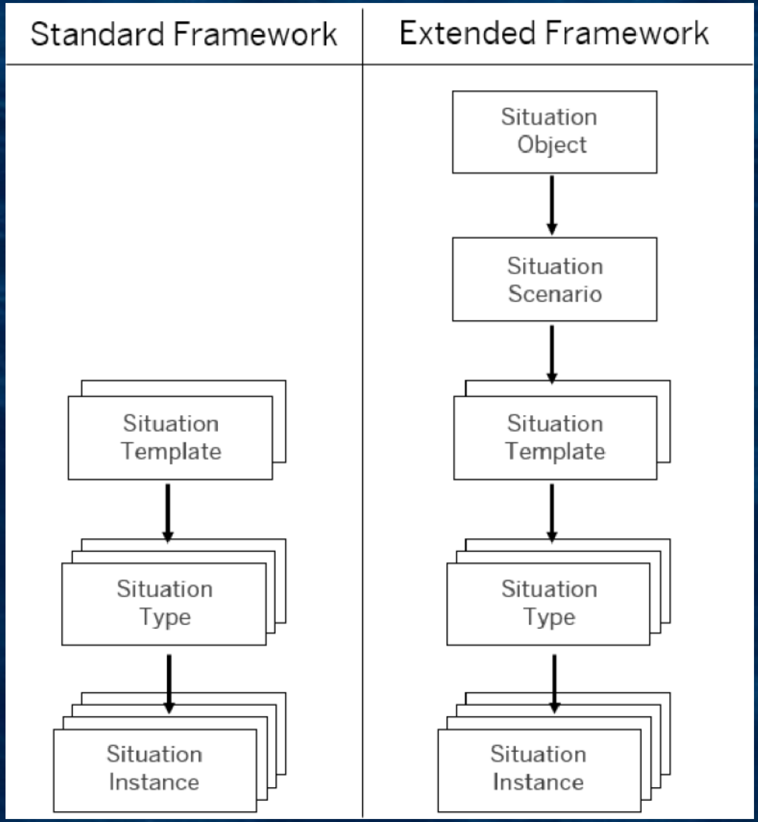
- Digital Access
- Analytics
- Virtual Data Model and CDS Views
- Process Management and Integration
  - Situation Handling
    - Situation Handling in a Nutshell
    - Use Cases for Situation Handling
      - Situation Handling Videos
    - Key Concepts in Situation Handling
    - Notifications
    - Situation Handling - Standard Framework
    - Situation Handling - Extended Framework
    - Technical Configuration Settings
    - Data Management in Situation Handling
    - Glossary for Situation Handling
    - FAQ
  - Responsibility Management
  - Business Event Handling
  - Business Event Logging
  - Intelligent Scenario Lifecycle Management
  - APIs for Process Management
- Process Observer (CA-EPT-POC)
- Master Data Governance
- Data Replication Framework
- Key Mapping

Area or Topic	Situation Template	Situation Template ID	Situation Template Type	Data Context	App Name	SAP Fiori ID	Scope Item
Filter: [No selection]	Search column	Search column	Filter: [No selection]	Filter: [No selection]	Filter: [No selection]	Filter: [No selection]	Filter: [No selection]
	Master Data Errors in Application Jobs				Extended		
Finance	Business Critical Locks in Application Jobs	FICA_LOCK_MESSAGE_BASED	Message-based	No	My Situations - Extended	F4537	not applicable
Finance	Business Critical Customizing Errors in Application Jobs	FICA_CUSTOMIZING_MESSAGE_BASED	Message-based	No	My Situations - Extended	F4537	not applicable
Finance	Monitor General Business-Critical Errors in Application Jobs for Convergent Invoicing	CINV_MASSACT_MESSAGE_BASED	Message-based	No	My Situations - Extended	F4537	not applicable
Finance	Errors and Warnings in Allocation Runs	FIN_ALLOCATION_RUN_WARNING_ERROR	Standard object-based	No	Run Allocations	F3548	2QL
Finance	Payment Reject	FIN_APM_PAYMENT_REJECT	Standard object-based	No	Manage Payments	F3647	4MT
Finance	Payment Requires Manual Repair	FIN_APM_PAYMENT_REPAIR	Standard object-based	No	Manage Payments	F3647	4MT
Finance	Payment Transaction Reject	FIN_APM_TRANSACTION_REJECT	Standard object-based	No	Manage Payments	F3647	4MT
Finance	Payment Item Requires Manual	FIN_APM_TRANSACTION_REPAIR	Standard object-based	No	Manage Payments	F3647	4MT

Choosing Your Framework

Standard framework

- Fastest time to value: activate SAP templates
- Predefined use cases per line of business
- Configuration only; low effort and risk
- Conditions limited to what the template offers



Extended framework

- Custom scenarios on any business object
- Flexible, multi-step conditions and triggers
- Automatic closure and richer lifecycle control
- More setup effort, and it needs a clear use case design

Situation Type is like a scheduled SAP job, defined once

Situation Instance is like one run of that job, one real hit

Extended Framework: Key Terms

Situation Object

Technical Definition: The business record an alert is about, e.g. Purchase Order or Supplier Invoice. It defines the data to watch (**CDS View**), **who is responsible** and the **actions offered** (Situation Page).

Situation Scenario

The business process the alert belongs to, grouping templates and types for one object, e.g. **“Purchase Order Monitoring”** for (a) overdue approvals and (b) late deliveries.

Situation Template

SAP-delivered blueprint fixing the structure of a situation: condition fields, message texts, navigation targets, e.g. **“PO Approval Overdue”**.

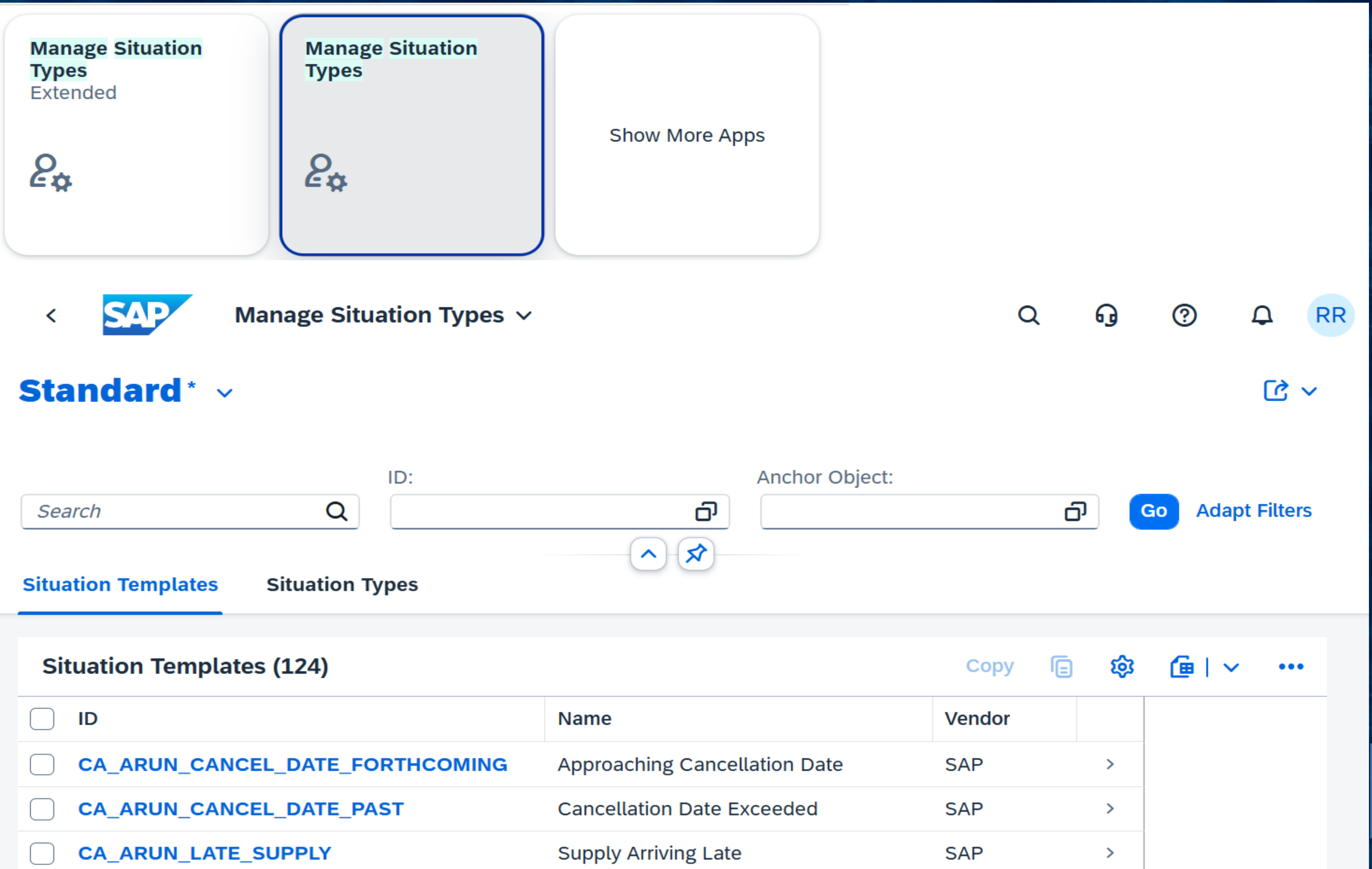
Situation Type

Your configured copy of a template with concrete values, e.g. **“PO approval overdue > 3 days, Purchasing Group 001, notify the buyer, high priority”**.

Situation Instance

The alert raised at runtime when a type’s conditions are met for one record, e.g. **“PO 4500012345 awaiting approval for 5 days”**, shown to the buyer; closes when approved.

Manage Situation Types: delivered templates



Situation Templates tab, 135+ delivered templates in this system, vendor SAP

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Situation type: Conditions

Situation Type

Z_FIN_GRIRDEVIATIONEXCEEDSTRHSHL Draft

Copy | Translate | Monitor Situations | Manage Instances

Admin Information | Situation Display | Conditions | Situation Monitoring | Batch Job Scheduling | Recipients

Conditions

View Situation Instances (10)

Create Copy Delete

Processing Order	Set to Status	Send Notification
1	Open	☑

All Filters | Used Filters | Compare and Edit Filters

Name	Value
Balance Absolute Amount In CoCode Crcy	
Balance Amount	<10000.00
Company Code	=1010
Company Code Currency	
Days Since Last Change of Processing	
Number Of Days Since Last Posting	
Plant	
Priority	
Purchasing Group	
Purchasing Organization	=1010
Root Cause	
Status	
Supplier	

The GR/IR deviation type: balance under 10,000, company code 1010

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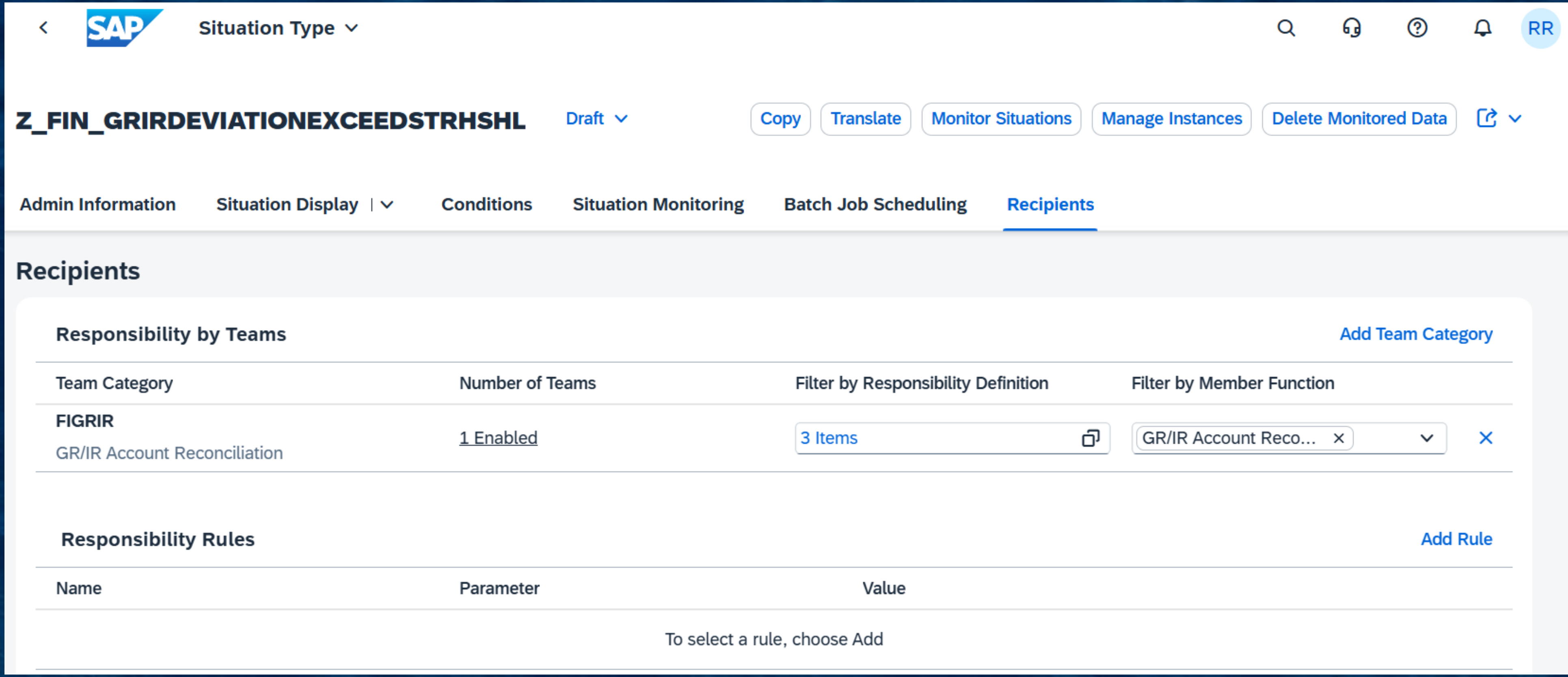
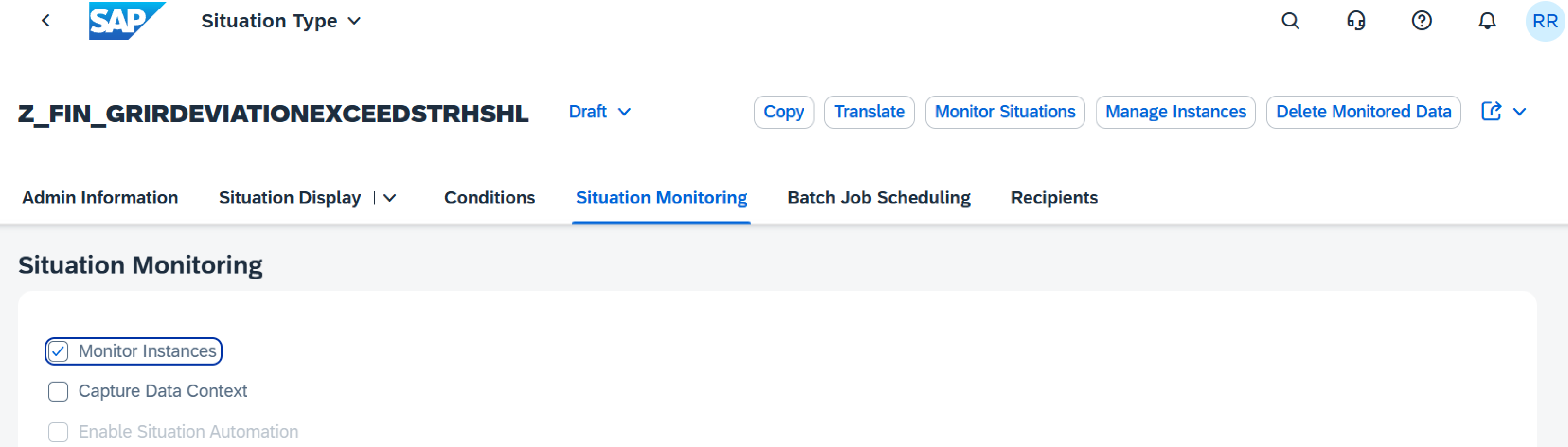
Situation type: Recipients



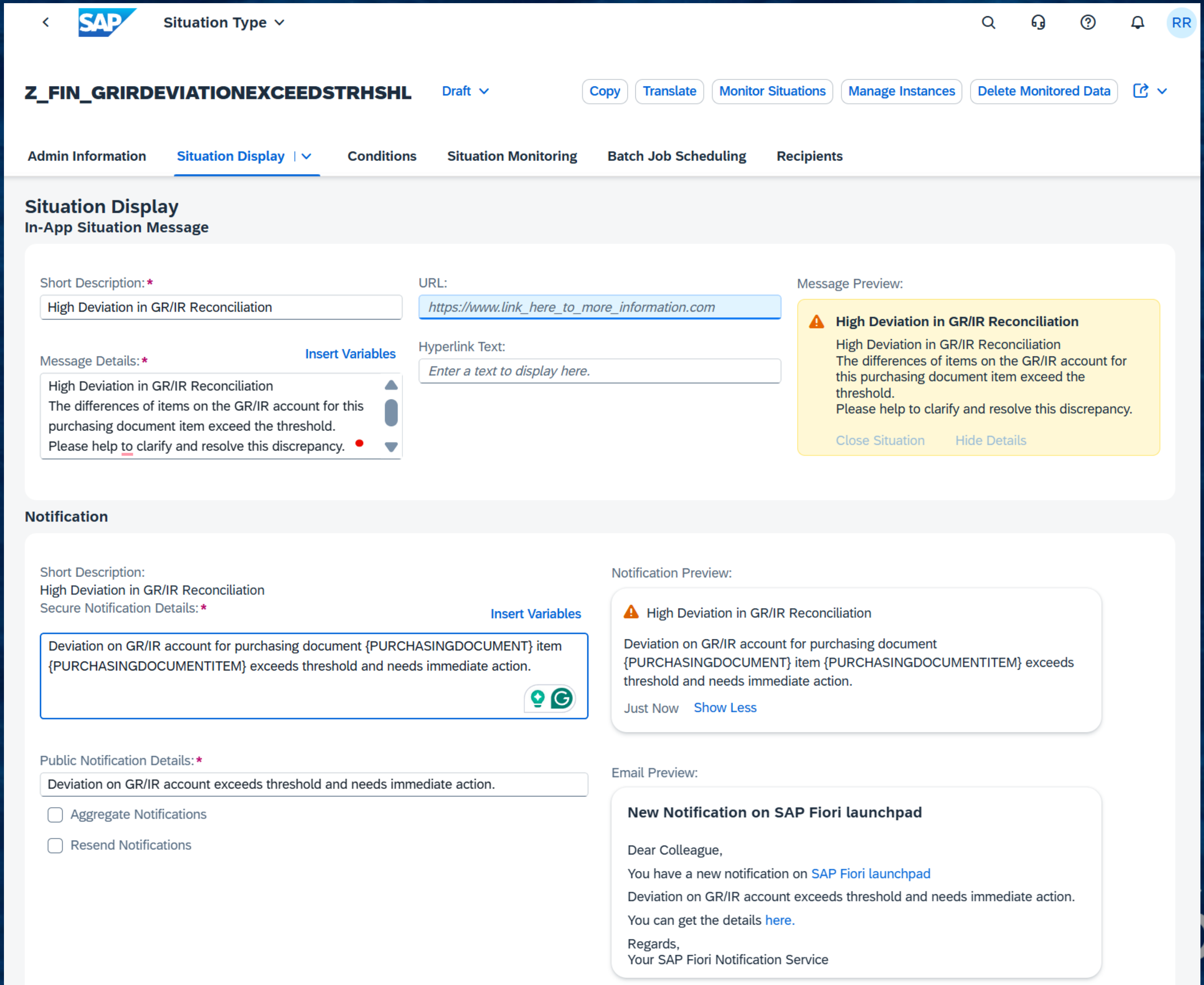
Team category FIGRIR, GR/IR Account Reconciliation, one enabled team

Situation type: Situation Monitoring

The Monitor Instances checkbox, the one that feeds the analytics app



Situation type: Situation Display



The texts the end user reads, with placeholders

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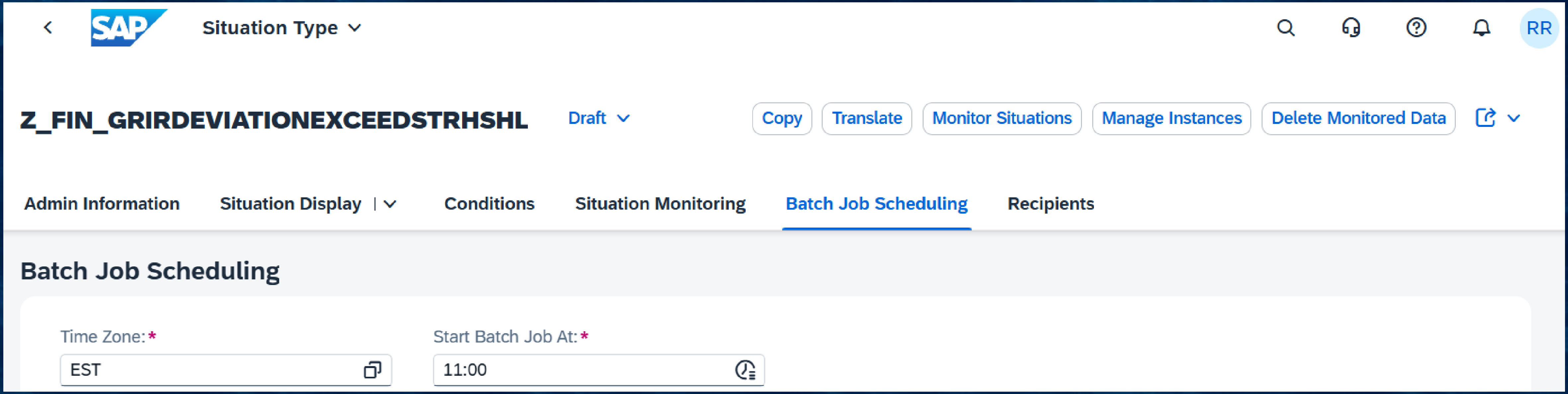
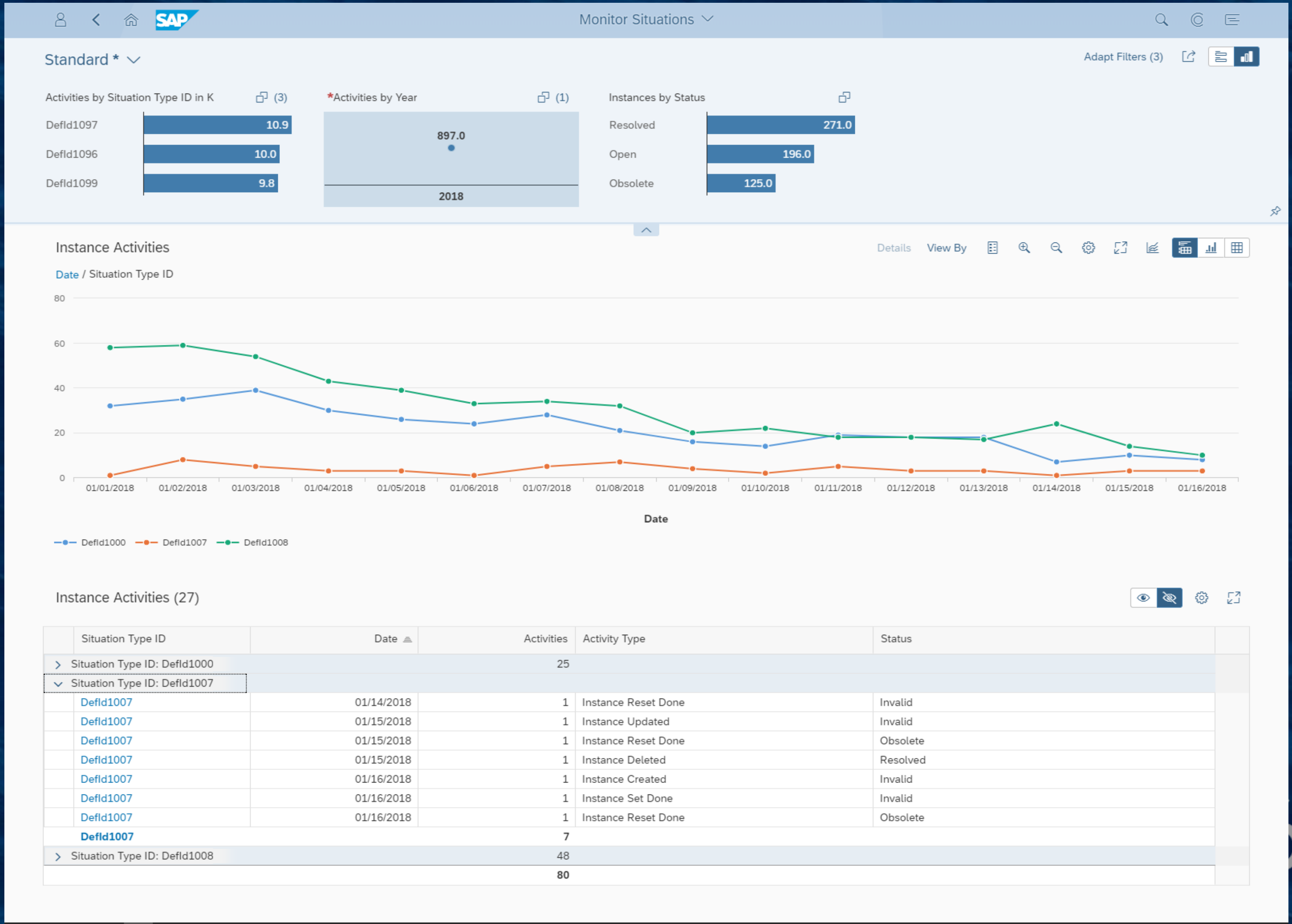
Situation type: Batch Job Scheduling

How often the detection job runs for a batch-based situation type



Monitor Situations: the analytics app



Activities by situation type, activities by year, instances by status, and the activity detail table

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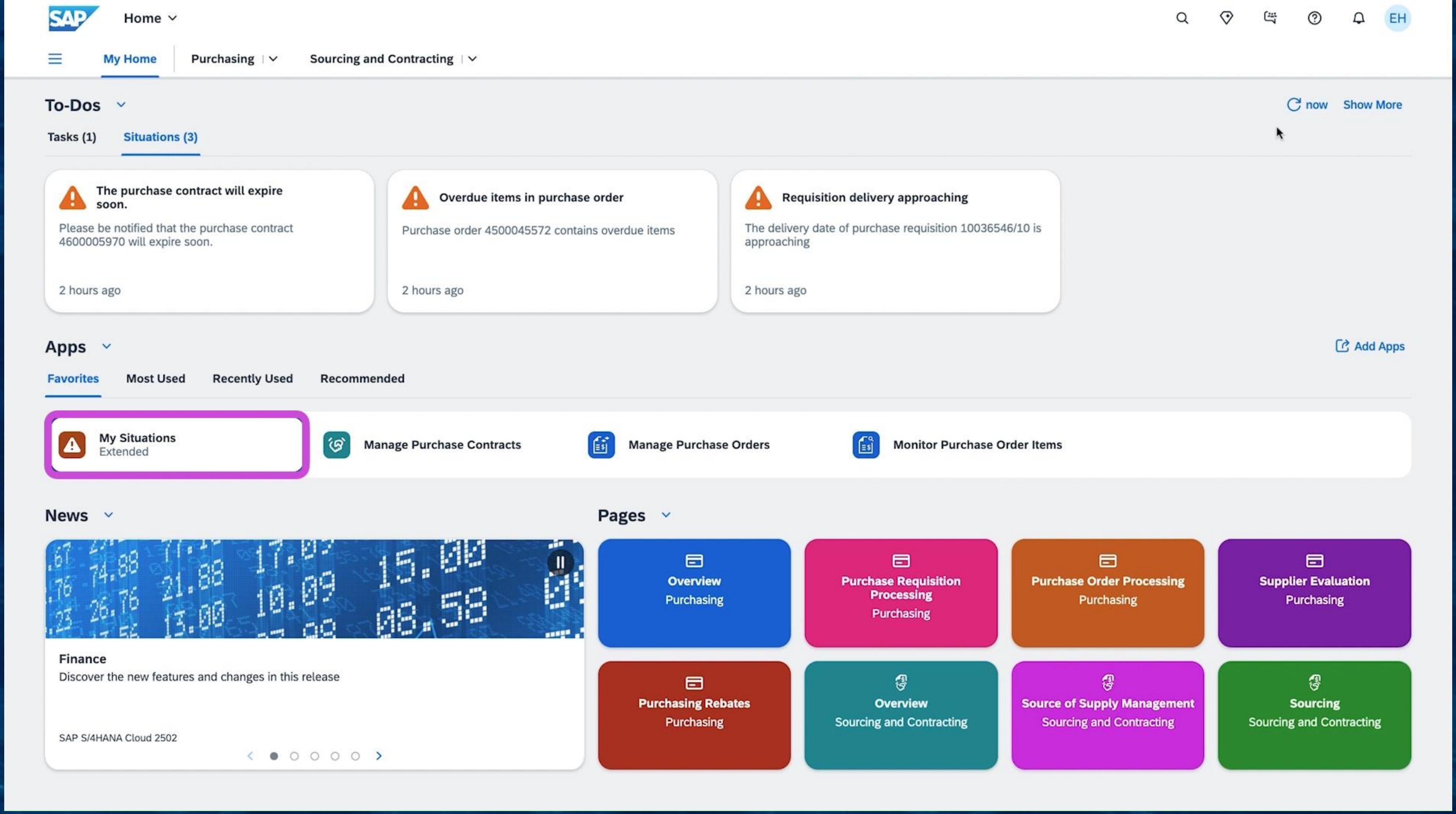
Monitor Situations: trend by situation type

Instance activity over time, grouped by situation type ID

Instance Details

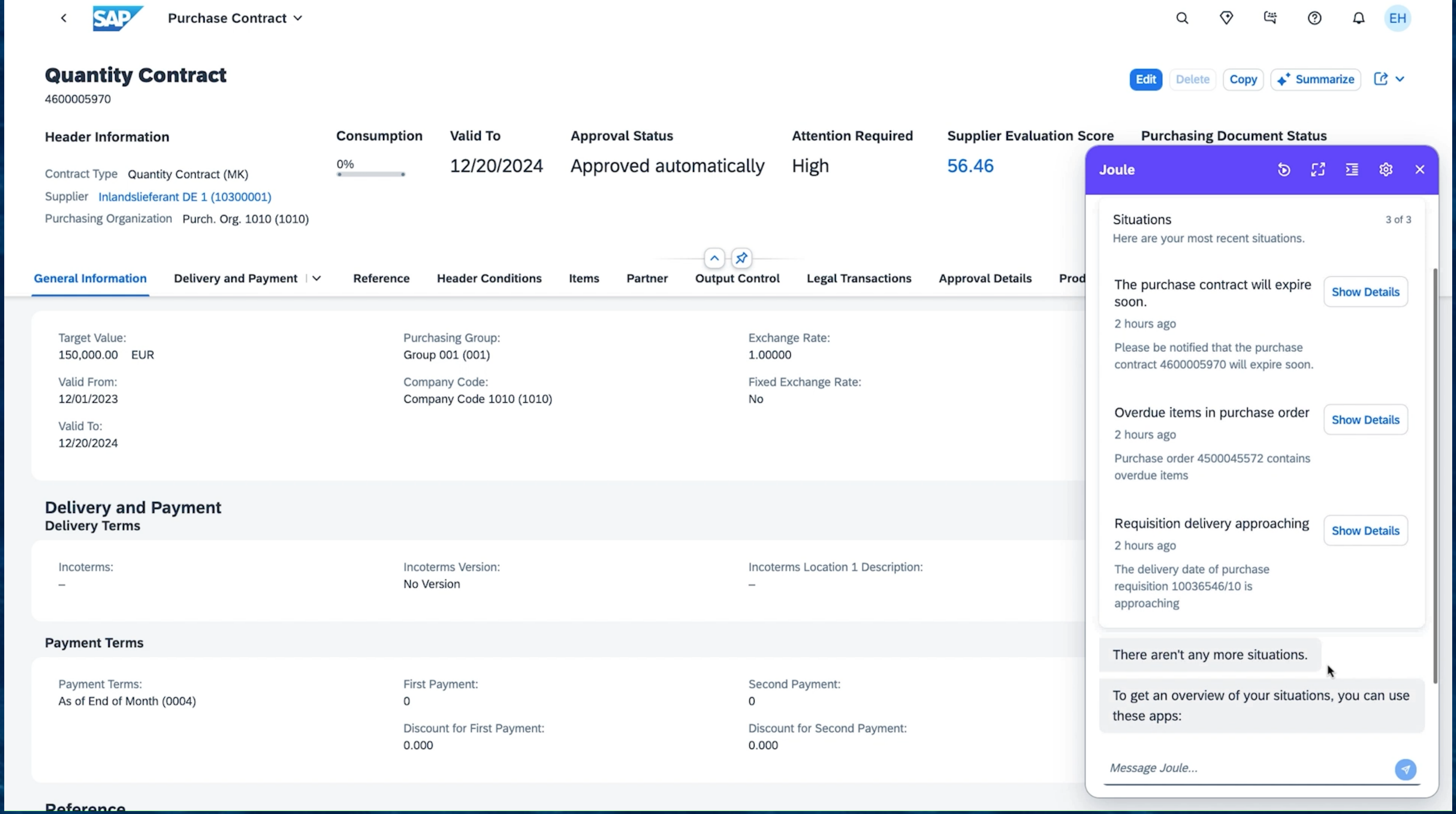
Activity Date/Time	Description of Activity Type	Description of Activity Trigger	Status	Anchor Object Key	Anchor Object Type	Date of Activity	Activities
Situation Type ID: Z_DEADLINE_CLOSE_FOR_SQ							
08/17/2020, 14:51:55	Instance Created	Situation Framework	Open	0020000007	Sales Quotation	08/17/2020	1
08/17/2020, 14:51:55	Instance Created	Situation Framework	Open	0020000009	Sales Quotation	08/17/2020	1
							2
Situation Type ID: Z_QUANTITY_DEFICIT_IN_PO							
08/14/2020, 14:29:00	Instance Created	Situation Framework	Open	4500004851/00010	Purchasing Doc./PO Item	08/14/2020	1
08/14/2020, 14:29:00	Instance Created	Situation Framework	Open	4500004852/00010	Purchasing Doc./PO Item	08/14/2020	1
08/14/2020, 14:29:00	Instance Created	Situation Framework	Open	4500004856/00010	Purchasing Doc./PO Item	08/14/2020	1
08/17/2020, 13:32:42	Instance Created	Situation Framework	Open	4500005012/00010	Purchasing Doc./PO Item	08/17/2020	1
08/17/2020, 13:32:42	Instance Created	Situation Framework	Open	4500005013/00010	Purchasing Doc./PO Item	08/17/2020	1
							5
							7

The end user view: My Home



Situations tab under To-Dos, with My Situations Extended pinned in Favorites

Asking Joule about situations



Joule listing situations in the user's area of responsibility

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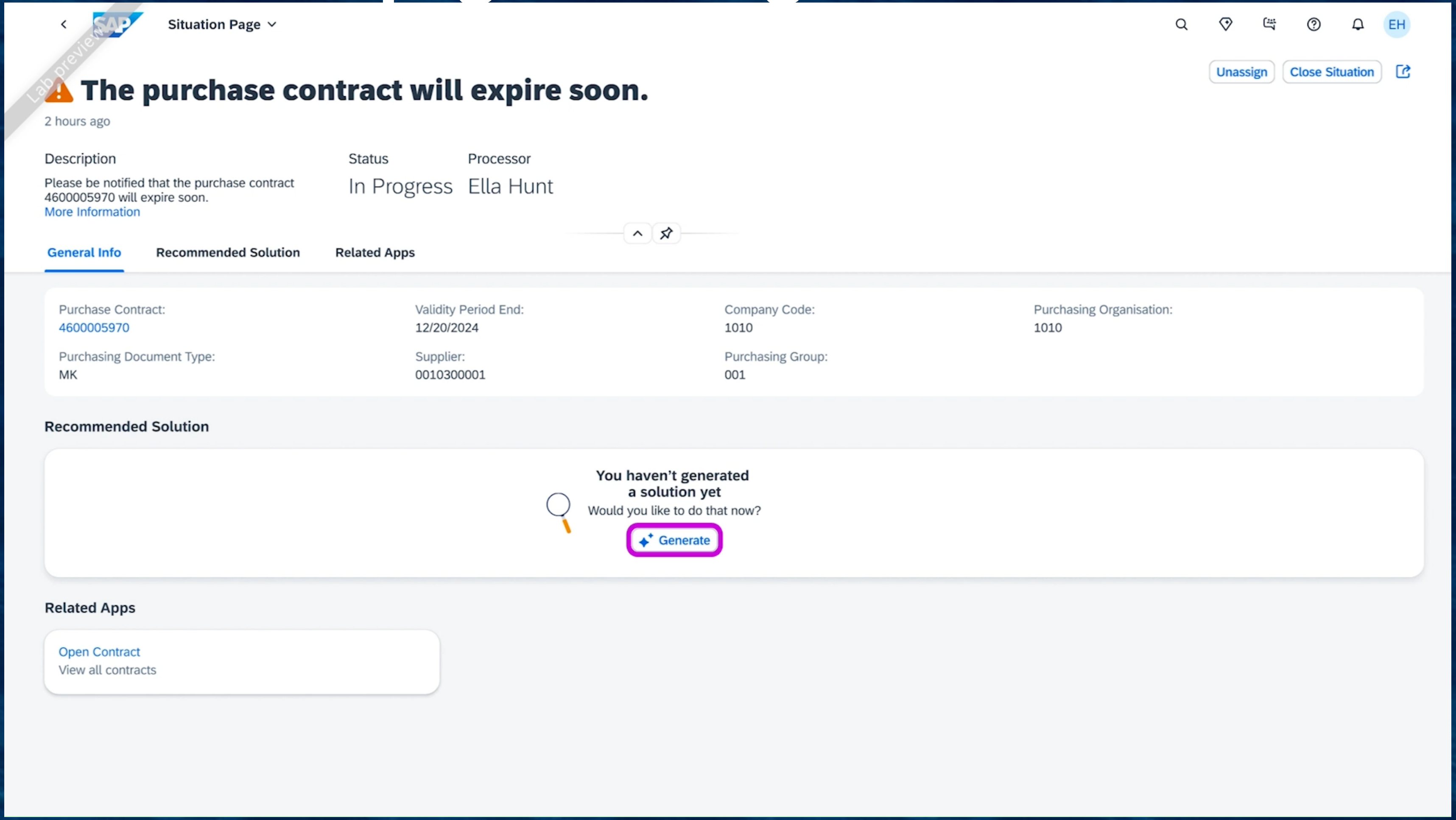
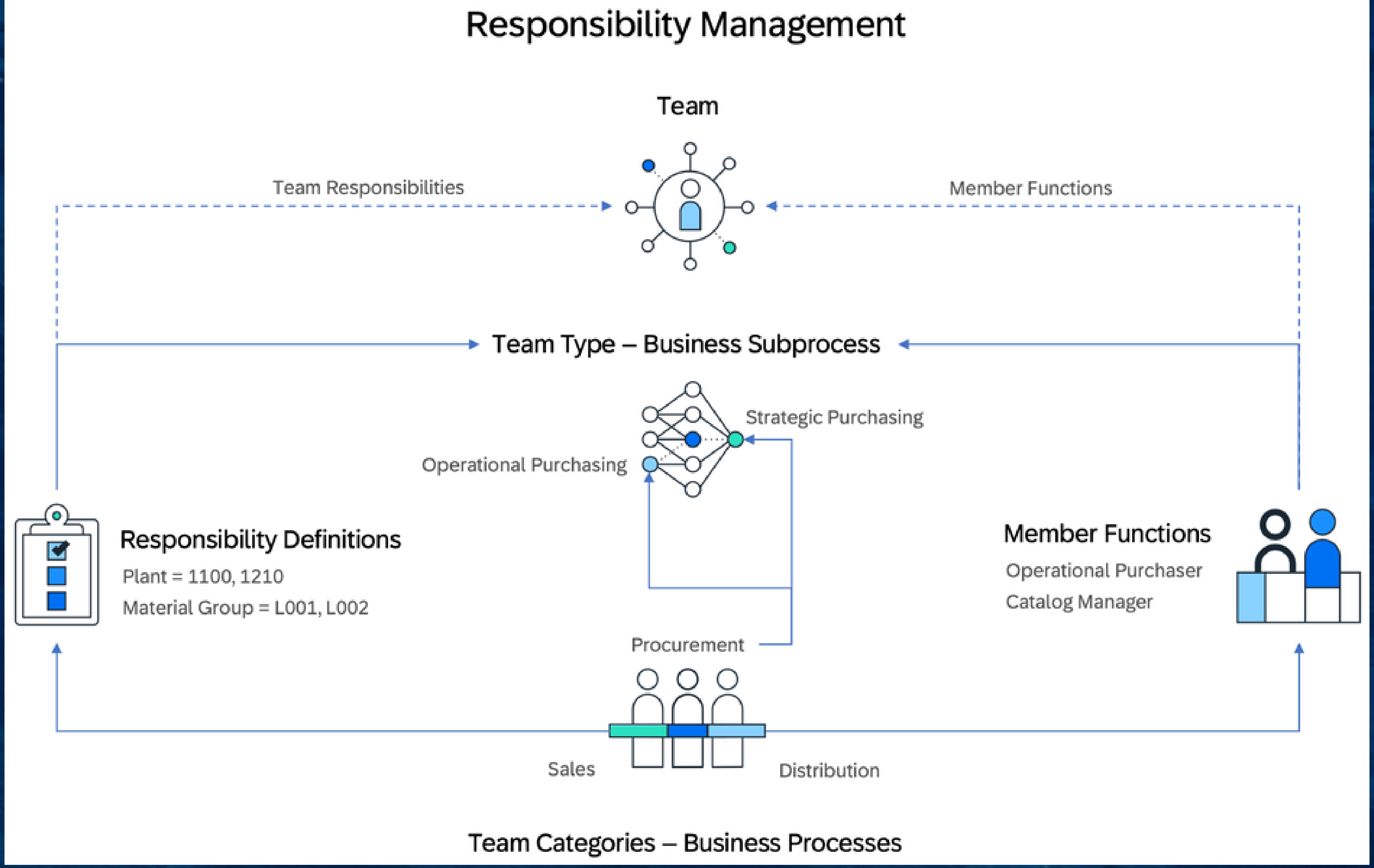
The situation page and AI-generated solution



Context, status, processor, a generated recommended solution, and related apps

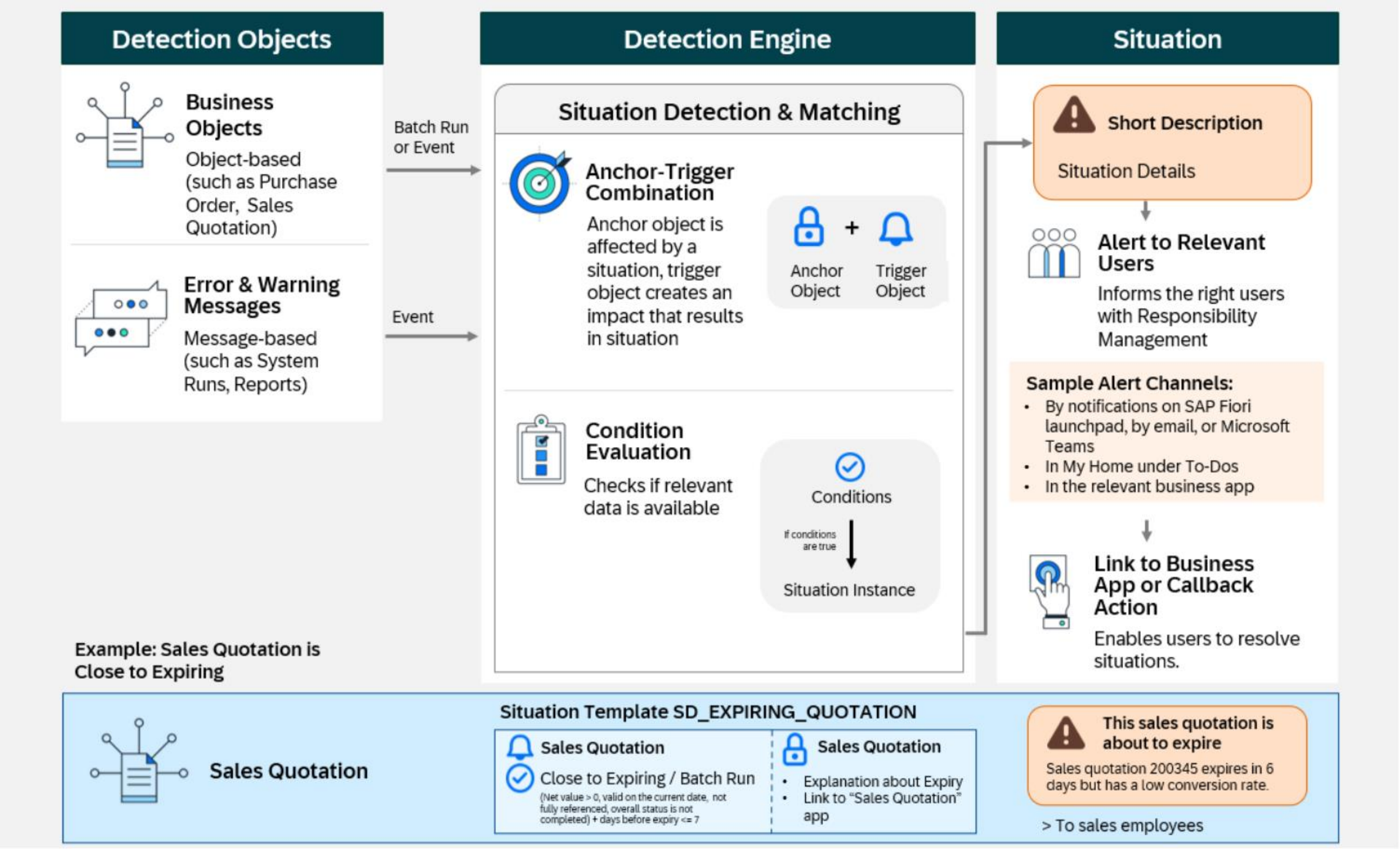
Responsibility Management: the model



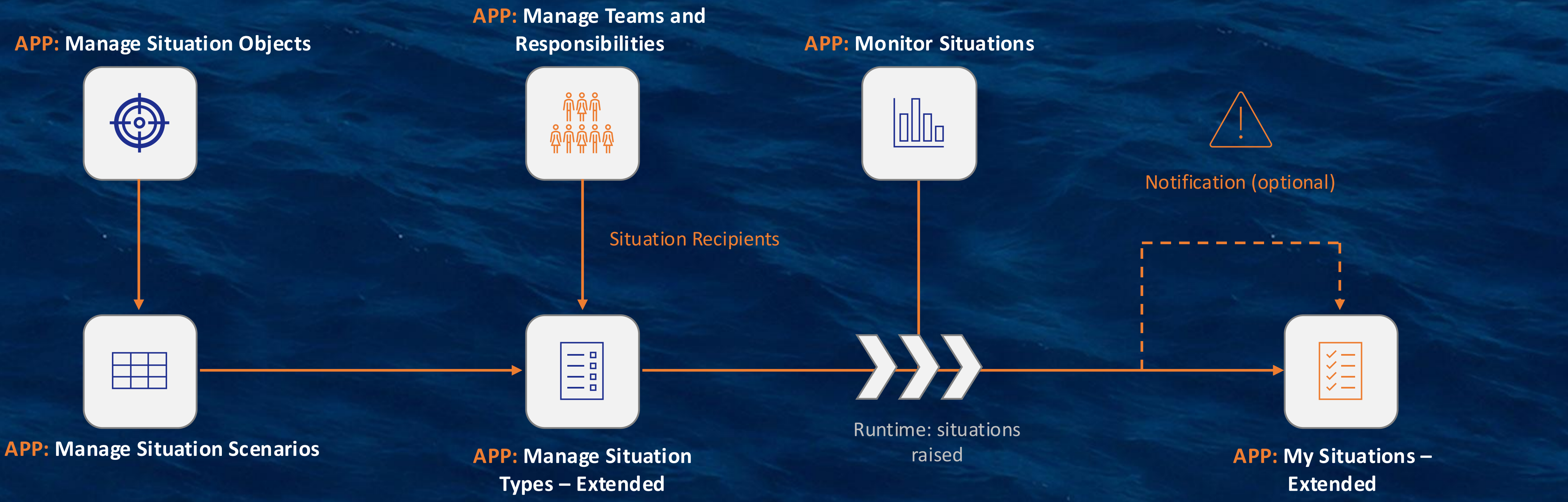
Teams carry responsibility definitions and member functions, scoped by team category

How It Works: Detect → Notify → Guide → Resolve

- Anchor object + trigger object + conditions → a situation instance, routed to the responsible user



Key Fiori Apps



Extensibility Specialist

SAP_BR_EXTENSIBILITY_SPECIALIST

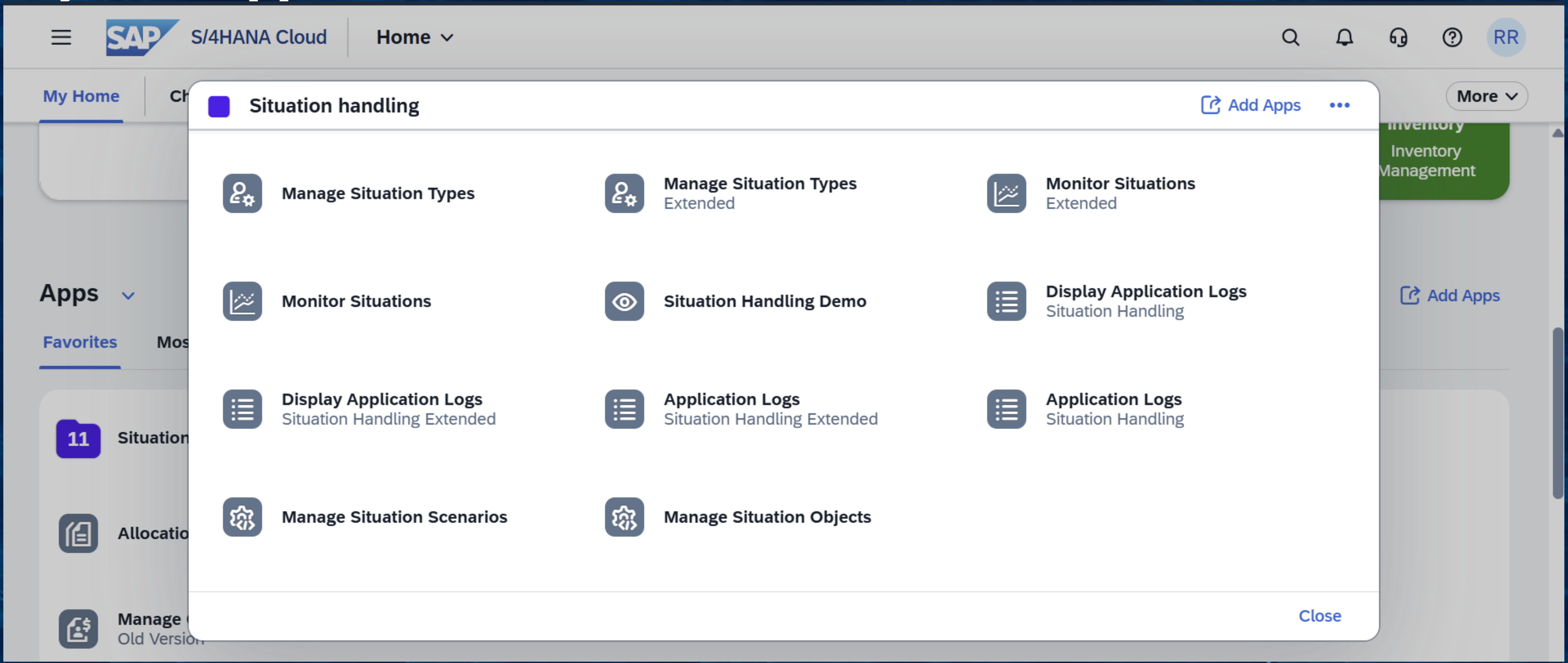
Business Process Configuration Expert

SAP_BR_BPC_EXPERT

Employee

SAP_BR_EMPLOYEE_SITUATION

Key Fiori Apps



Takeaway 1: Month-End Acceleration

Automating detection of variances, open items, and period-end anomalies

Standard Finance Situation Templates - Examples

GR/IR deviation exceeds threshold

FIN_GRIRDEVIATIONEXCEEDSTRHSHLD

Catches GR/IR gaps as they grow, not at close

GR/IR processor was changed

FIN_GRIRPROCESSORCHANGED

Flags ownership handovers on open GR/IR items

Invoice skipped in payment advice

FIN_PAYMENTADVICEINVOICESKIPPED

Alerts AP before the payment run misses an invoice

Errors and warnings in allocation runs

FIN_ALLOCATION_RUN_WARNING_ERROR

Tells the controller the allocation needs a rerun

Billing documents not posted

SD_BILLING_DOCUMENT_NOT_POSTED

Protects revenue completeness at close

Variance and Open-Item Detection

Threshold-based

Cost center and internal order variances beyond a set limit (extended framework)

Aging-based

Open items and uncleared accounts that age through the month, not only at close

Deadline-based

Unposted accruals and missing entries caught before the period lock

Exceptions reach the preparer during the month, so there are fewer surprises in the close calendar.

Close tasks start from a clean position.

Takeaway 2: Broader Operational Coverage

Planning, budgeting, intercompany, and cost center monitoring

Beyond the Close: Where Else It Applies

The same mechanism, pointed at three other Controlling problems

Planning and budgeting

- Budget threshold exceeded (PSM_BM_BUDGETTHRESHOLD EXCEEDED)
- Alert owners at 80% and 100%, before the overrun posts
- Deadline situations keep submission cycles on track

Intercompany

- Unmatched documents detected as they arise
- Threshold situations on out-of-balance trading partner pairs
- Routed to the owning entity; complements ICMR and AFC

Cost centers

- Actuals against budget by cost center group
- Postings to locked or incorrect cost centers
- Unexpected balances after settlement

Cost Accounting: Event-Based Costing Errors

Template **FIN_EBPC_ERROR_MONITOR** | extended framework, event-based, self-closing

What it watches

- Event-based WIP errors
- Event-based cost distribution errors
- Event-based variance posting errors

How it triggers

- Error created: cost accountant is notified
- Error resolved: the situation closes itself
- No batch job to schedule, no report to run

What you configure

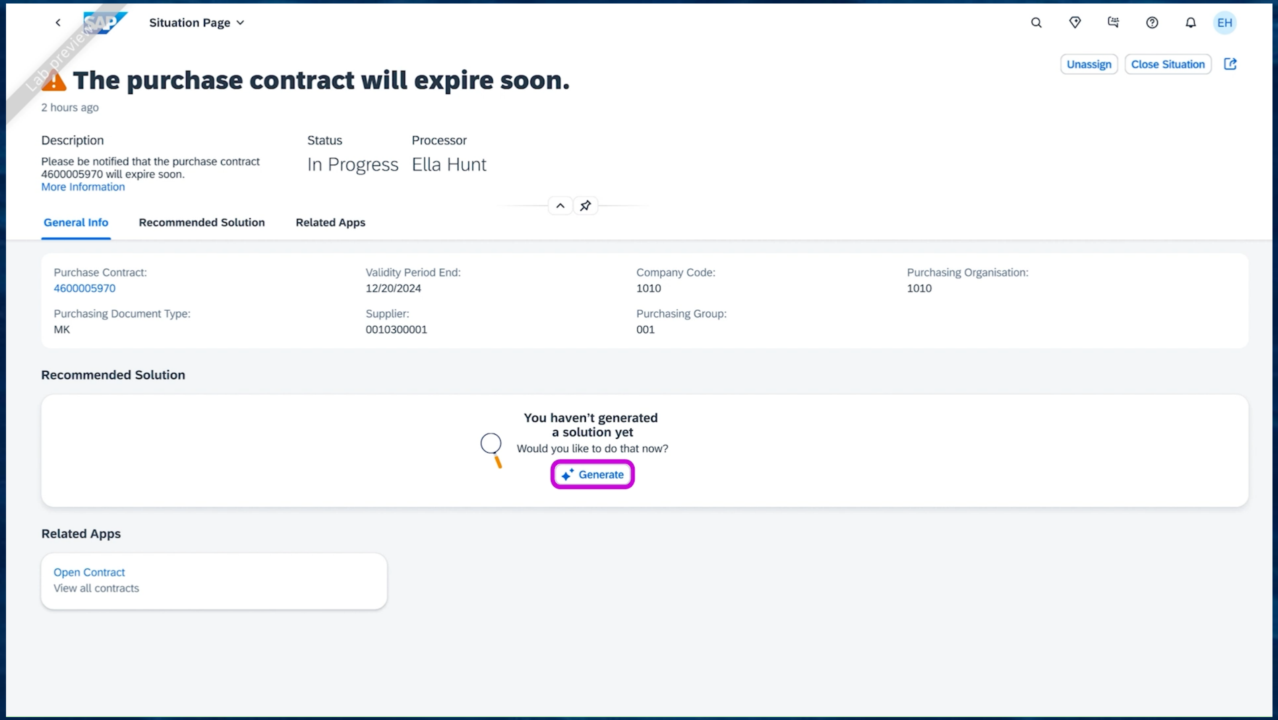
- Copy the template into your own situation type
- Team category EMPC (Error Monitoring in Product Costing)
- Company code is a mandatory responsibility

Takeaway 3: Joule Integration

Natural-language alerts, AI-assisted explanation, and guided resolution

Joule + Situation Handling

- Joule surfaces open situations conversationally: "What needs my attention today?"
- The situation page itself offers a recommended solution, generated on demand
- Drill from the answer straight into the fix, with related apps one click away
- Alerts also reach users on the Fiori launchpad, by email, and via SAP Mobile Start



AI-Assisted Error Resolution for Cost Accounting

Scope item 3F0 | from alert to corrected posting, without leaving the conversation

Situation	Situation page	Ask Joule	Explanation	Resolve
Cost accountant is notified of an error	All affected orders, with context	"Explain the error for this order"	Root cause, plus resolution options	Guided steps, then repost

Two ways in

- Click the situation from My Home or My Situations – Extended
- Or skip it: ask Joule "show me my errors in company code 1010"

Where it lands

- Joule recommends the best option when several exist
- Navigate straight to Manage Product Costing Errors to fix and repost

Takeaway 4: Simple to Start

From prerequisites to production in three steps

Configuration in Three Steps

Three apps, one sequence: set the team, create the type, monitor the results

1. Set the team

- **App: Manage Teams and Responsibilities**
- Team category must match the situation type
- Scope by company code, cost center or purchasing group
- Get this right first: most missing notifications start here

2. Create the type

- **App: Manage Situation Types**
- Copy a template; never edit the original
- Set conditions, thresholds and a notification text people can act on
- Assign the team, then activate

3. Monitor and refine

- **App: Monitor Situations (switch on Monitor Instances in the type)**
- Tune thresholds: too many alerts is noise
- Review quarterly and retire types nobody acts on
- Recheck templates after each upgrade

Analytics: Where Alerting Becomes Process Improvement

Monitor Situations turns a month of alerts into evidence about your process

What the app shows

- Instance volumes by situation type and period
- Status mix: open, in progress, resolved, obsolete
- Activity per instance, as a chart or a table
- Filters by object, company code, date and status

Questions it answers

- Which types fire most, and where?
- How long does an alert wait before someone acts?
- How many close on their own?
- Which types does nobody resolve?

What you do about it

- Constant firing: fix the upstream process, not the threshold
- Long waits: the alert is reaching the wrong person
- High self-closure: the threshold is too tight
- No action: retire the type

Four Takeaways

1. Month-End Acceleration

- Variances, open items and period-end anomalies are detected as they arise, not on close day
- The right person is notified with the context and the action attached

2. Broader Operational Coverage

- The same mechanism covers planning, budgeting, intercompany and cost center monitoring
- One framework, one set of apps, many Controlling problems

3. Joule Integration

- Alerts in plain language: "What needs my attention today?"
- For cost accounting errors, an explanation and a guided fix without leaving the conversation

4. Simple to Start

- Three apps: set the team, create the type, monitor the results
- Start with one template, one team and one threshold, then measure it in Monitor Situations

Best Practices

- Start with SAP standard templates before building extended scenarios
- One accountable team per situation type. Avoid broadcast notifications
- Keep messages action-oriented: what happened, why it matters, what to do
- Align thresholds with materiality, not perfection
- Plan for template lifecycle. SAP deprecates templates, usually with one upgrade of warning

Resources

- SAP PRESS: Introducing Situation Handling with SAP S/4HANA (E-Bite, ISBN 978-1-4932-2764-8)
- SAP Community, Intelligent Situation Handling: pages.community.sap.com/topics/intelligent-situation-handling
- SAP Help Portal: Situation Handling, plus Production Accounting for the cost accounting scenario
- SAP Best Practices scope items: 31N Situation Handling, 1NJ Responsibility Management, 3F0 event-based production costs
- SAP Discovery Center: error resolution for cost accounting demo video
- Support components: CA-SIT-ENG (framework) / CA-SIT-DA (monitoring apps)

Questions & Answers

Contact Information:

Speaker: Raghu Ram Thatavarthy

Company: Quadric IT LLC

Website: www.quadricit.com

Email: ram@quadricit.com

Mobile: +1 973 722 3175

Linkedin:

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Extended framework: Manage Situation Scenarios

Manage Situation Scenarios

Standard

Search | Editing Status: All | Scenario Type: | Object Structure Type: | Go | Adapt Filters

- Message-Based
- Object-Based

Situation Scenarios (8)

ID/Name	Scenario Description	Scenario Type	Object Structure Type	Source
ISPRS_PROJECT_LIFECYCLE Project Life Cycle	Checks data for the life cycle of a professional services project (such as project dates or project stage).	Object-Based	CDS	SAP
PROC_PRMTHB_RPLD_PO_HDR Replicated Purchase Order Header	Procurement Hub Replicated Purchase Orders in Central Purchasing	Object-Based	CDS	SAP
PROC_PRMTHB_RPLD_PO_ITM Replicated Purchase Order Item	Procurement Hub replicated purchase order item	Object-Based	CDS	SAP
PROC_PRMTHB_RPLD_PO_SCHD_LINE Replicated Purchase Order Item Schedule Line	Schedule line fields of replicated purchase order items	Object-Based	CDS	SAP
PROC_PURCHASECONTRACTHDR Purchase Contract Header	Situation Scenario for Purchase Contract Header	Object-Based	CDS	SAP
PROC_PURCHASEREQNITEM Purchase Requisition Item	Situation Scenario for Purchase Requisition Item	Object-Based	CDS	SAP
PROC_REPLPURCHASEREQNITEM Item of Centrally Managed Purchase Requisition	Covers all items of a centrally managed purchase requisition	Object-Based	CDS	SAP
SITDEMO_FLIGHT_PROFITABILITY Flight Profitability	Demo scenario that supports the demo templates Ecological Footprint, Sales Rate, and Booking Rate.	Object-Based	CDS	SAP

Where anchor and trigger objects are modelled for a custom scenario